

Remarks

The Office Action mailed June 30, 2004 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-20 are now pending in this application, of which claim 1 has been amended. It is respectfully submitted that the pending claims define allowable subject matter.

Applicants respectfully traverse the objection to the disclosure. The correction noted in the Office Action was requested in the Preliminary Amendment filed in the case on September 4, 2003. Applicants also note that other corrections were made to the specification in the Preliminary Amendment. A courtesy copy of the Preliminary Amendment is attached hereto in the event that the Preliminary Amendment is not in the Examiner's possession.

For the reasons set forth above, Applicants request that the objection to the disclosure be withdrawn.

The rejection of claims 1-4 and 6 under 35 U.S.C. § 102(b) as being anticipated by Chiu (U.S. Patent No. 6,454,461) is respectfully traversed.

Claim 1 recites a low profile contact comprising "a rounded spring portion having a first end and a second end," and "a first contact beam and a second contact beam extending from said respective first and second ends of said rounded spring portion, said rounded spring portion joining said first contact beam and said second beam, said first contact beam and said second contact beam having substantially parallel distal end portions, at least one of said distal end portions comprising an upstanding guide surface configured to receive and align a connection pin between said distal end portions."

Chiu describes a terminal (3) having a body (31) with a flat middle base (310). Spring arms (32) and (34) extend from opposite sides of the middle base (310), and the spring arms (32) and (34) extend at right angles to the middle base (310). Each spring arm (32) and (24) includes

an S-shaped cantilever portion (320) and a contact portion (322) which receives a contact pin (64).

The Chiu terminal lacks a rounded spring portion joining a first contact beam and a second contact beam extending from respective first and second ends of the rounded spring portion as recited in claim 1. Rather, the Chiu terminal includes a flat, rather than rounded, middle base (310) and spring arms (32) and (34) extending generally perpendicular to the middle base (310). See Chiu Figures 1, 2, and 4. While each of the Chiu spring arms (32) and (34) may have an S-shape or configuration, neither of the spring arms meet the recited rounded spring arm portion of claim 1 because the S-shaped cantilever portions (322) of the spring arm (32) and (34) do include contact beams extending from the respective ends of the S-shaped portion (322).

Claim 1 is therefore submitted to be neither described nor suggested by Chiu, and claim 1 is accordingly submitted to be patentable over Chiu.

Claims 2-4 and 6 depend from claim 1, and when the recitations of claims 2-4 and 6 are considered in combination with the recitations of claims 2-4 and 6, it is respectfully submitted that claims 2-4 and 6 are likewise patentable over Chiu.

Moreover, Applicants note that the contact pin (64) of Chiu, as shown and described in relation to Figure 4, is inserted into the Chiu terminal in a direction parallel to a longitudinal axis of the spring arms, and not perpendicular to the longitudinal axis as claim 3 recites.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-4 and 6 be withdrawn.

The rejection of claims 5 and 7 under 35 U.S.C. § 103 as being unpatentable over Chiu is respectfully traversed.

Claims 5 and 7 depend from claim 1, which is submitted to be patentable over Chiu for the reasons set forth above. When the recitations of claims 5 and 7 are considered in

combination with the recitations of claim 1, claims 5 and 7 are likewise submitted to be patentable over Chiu.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claims 5 and 7 be withdrawn.

The rejection of claims 8-15 and 17-20 under 35 U.S.C. § 103 as being unpatentable over Fedder et al. (U.S. Patent No. 4,975,069) in view of Youngfleish (U.S. Patent No. 5,224,885) is respectfully traversed.

Claim 8 recites a low profile contact assembly comprising “a first contact comprising a curved resilient spring portion having a first end and a second end, and a first contact beam and a second contact beam extending from said respective first and second ends of said spring portion,” “a second contact comprising a curved resilient spring portion having a first end and a second end, and a first contact beam and a second contact beam extending from said respective first and second ends of said spring portion,” and “said first and second contacts arranged inversely to one another such that said spring portions of each of said first and second contacts are oriented toward one another in a nested configuration.”

Fedder et al. describe a modular connector (10) including signal and ground contacts (14), (46). The signal contacts (14) include a lead (36) at one end, a receptacle (38) at a second end, and a U-shaped retention section (40) extending therebetween. The receptacle (38) includes a pair of beams (42). As shown in Figure 2, the signal contacts (14) are aligned with one another in a housing (12), and the signal contacts are not arranged inversely to one another.

The Office Action cites Figures 6A and 6B of Fedder et al. as depicting nested contacts. The embodiment of Figures 6A and 6B includes L-shaped portions (152) on the leads of the signal contacts which cooperatively connect to a single lead of a wire (86). While the L-shaped portions (152) of the signal contacts face one another, the signal contacts are not arranged inversely to one another as claim 8 recites. As explained at least in paragraph [0031] of the

present specification, the inverse arrangement of contacts results in a head-to-toe configuration of adjacent contacts. Clearly the signal contacts of Fedder et al. are not arranged inversely to one another, and Fedder et al. suggest no desirability of arranging contacts in such a configuration.

Youngfleish is cited for teaching a low profile contact, but Youngfleish does not cure the deficiencies of Fedder et al. with respect to claim 8. Youngfleish neither describes nor suggests an arrangement of contacts inverse to one another as claim 8 recites.

It is therefore respectfully submitted that Fedder et al. and Youngfleish collectively fail to teach or suggest each recited element of claim 8, and claim 8 is therefore submitted to be patentable over Fedder et al. in view of Youngfleish.

Claims 10-14 depend from claim 8, and when the recitations of claims 10-14 are considered in combination with the recitations of claim 8, claims 10-14 are likewise submitted to be patentable over Fedder et al. and Youngfleish.

Claim 15 recites a low profile electrical connector comprising “a housing” and “at least one low profile contact situated within said housing,” said contact comprising “a curved resilient spring portion,” and “a first contact beam and a second contact beam extending from opposite ends of said spring portion, said first contact beam and said second contact beam extending along a longitudinal axis, at least one of said distal end portions comprising an upstanding guide surface configured to receive and align a connection pin inserted between said first and second contact beams along an insertion axis substantially perpendicular to said longitudinal axis.”

Neither Fedder nor Youngfleish describe an upstanding guide surface configured to receive and align a connection pin inserted between first and second contact beams along an insertion axis substantially perpendicular to said longitudinal axis. Rather, each of Fedder et al. and Youngfleish describe connectors wherein a connection pin is inserted *parallel* to a longitudinal axis of the contact beams. Indeed, the housing of the Fedder et al. and Youngfleish devices in which their respective contacts are used physically prevent insertion of a connection

pin into the contacts along an axis perpendicular to the contact pins. Note the passages (20) in the housing (12) of Fedder et al. in Figures 1 and 2 which only extend parallel to the longitudinal axis of the contacts 14, and the absence of any passages in the housing (12) which extend perpendicular to this axis. Also note the housing (11) in Figures 6-14 of Youngfleish which would allow insertion of a pin in a direction parallel to the axis of the contact beams (5) but prohibit insertion of a pin in a direction perpendicular to the axis of the beams (5). Thus, Fedder et al. and Youngfleish are respectfully submitted to teach away from the present invention.

The connector of claim 15 is therefore respectfully submitted to be neither described nor suggested by Fedder et al. in view of Youngfleish, and claim 15 is accordingly patentable over Fedder et al. in view of Youngfleish.

Claims 17-20 depend from claim 15, and when the recitations of claims 17-20 are considered in combination with the recitations of claim 15, claims 17-20 are likewise submitted to be patentable over Fedder et al. in view of Youngfleish.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claims 8-15 and 17-20 be withdrawn.

The rejection of claim 16 under 35 U.S.C. § 103 as being unpatentable over Fedder in view of Youngfleish and further in view of Barkus (U.S. Patent No. 4,966,557) is respectfully traversed.


Claim 16 depends from claim 15, which is submitted to be patentable over Fedder in view of Youngfleish for the reasons set forth above. Barkus does not cure the deficiencies of Fedder in view of Youngfleish with respect to claim 15. Barkus, like Fedder and Youngfleish, describe a contact element wherein a connection pin is received between contact beams along an axis *parallel*, rather than perpendicular, to the longitudinal axis of the contacts. As none of the cited references describes or suggests at least this recitation of claim 15, claim 15 is submitted to be patentable over Fedder in view of Youngfleish and further in view of Barkus.

When the recitations of claim 16 are considered in combination with the recitations of claim 15, claim 16 is likewise submitted to be patentable over Fedder in view of Youngfleish and further in view of Barkus.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claim 16 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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